Abstract

Antifungals based on dolastatin 10 and four structural modifications thereof (herein "peptides") and methods of treating a host afflicted with a fungi-induced infection are herein described. In broth macrodilution assays, these peptides were fungicidal for ATCC strains and clinical isolates of *Cryptococcus neoformans*. Specificity for *C. neoformans* was also demonstrated in the solid-phase disk diffusion assay, and fungicidal activity confirmed in killing kinetics experiments. Broth macrodilution minimum inhibitory and minimum fungicidal concentrations for the most potent modification ranged from 0.0975-1.56 μg/ml and 0.0975-6.24 μg/ml, respectively. The minimum inhibitory concentrations were nearly identical in the presence of human serum, but increased with lowered pH. Suitable dosage forms for use of the novel antifungals are also described.